

In the Claims:

1. (Currently Amended) A method for stimulating an immune response specific toward a naturally-occurring protein in an animal having an immune system including T cells, said method comprising administering to said animal an altered protein or polypeptide fragment thereof derived from said naturally-occurring protein, wherein an unstable polypeptide segment has been inserted by artifice into the interior of the primary amino acid sequence of said altered naturally-occurring protein, wherein said unstable polypeptide segment has an average hydrophobicity value that is lower than the average hydrophobicity value of said altered protein; has a sequence conservation that is lower than a sequence conservation of said altered protein; has an amide protection factor that is lower than 10^4 wherein said altered protein is in a native conformational state; has an average amide protection factor that is lower than the average amide protection factor for said altered protein in a denatured conformational state; has an NMR order parameter (S^2) of less than 0.8; or has an average B-factor value that is higher than the average B-factor value of said altered protein, and wherein immunogenicity of said naturally-occurring protein is increased.

2. (Original) The method of claim 1, wherein said naturally-occurring protein is from a pathogen.

3. (Original) The method of claim 2, wherein said altered protein or polypeptide fragment thereof is administered to said animal to prevent infection of said animal with said pathogen.

4. (Previously Presented) The method of claim 1, wherein said naturally-occurring protein is from a neoplastic cell.

5. (Original) The method of claim 4, wherein said altered protein or polypeptide fragment thereof is administered to said animal to inhibit growth of said neoplastic cell in said animal.

6. (Original) The method of claim 1, wherein said altered protein or polypeptide fragment thereof is administered with a pharmaceutically acceptable carrier, an adjuvant or both.

7. (Original) The method of claim 1, wherein said animal is a mammal.

8. (Original) The method of claim 7, wherein said mammal is a human.

9. (Cancelled)

10. (Previously Presented) The method of claim 1, wherein said altered protein or polypeptide fragment thereof is in a vaccine.

11. (Previously Presented) The method of claim 1, wherein said unstable polypeptide segment comprises at least twelve amino acid residues.

12. (Original) The method of claim 11, wherein not more than 30% of said amino acid residues are selected from the group of amino acid residues consisting of isoleucine, leucine, valine, tyrosine, phenylalanine, tryptophan, threonine, and methionine.

13. (Previously Presented) The method of claim 1, wherein said unstable polypeptide segment comprises a polypeptide sequence that is specifically recognized by a protease.

14. (Cancelled)

15. (Previously Presented) The method of claim 1, wherein said altered protein comprises a T cell epitope.

16. (Original) The method of claim 15, wherein said unstable polypeptide segment is inserted N-terminally adjacent to said T cell epitope.

17. (Original) The method of claim 15, wherein the C-terminal portion of said unstable polypeptide segment overlaps the N-terminal portion of said T cell epitope.

18. (Original) The method of claim 15, wherein said T cell epitope has an average hydrophobicity value that is higher than the average hydrophobicity value of said altered protein; has a sequence conservation that is higher than a sequence conservation of said altered protein; has an amide protection factor that is greater than 10^4 wherein said altered protein is in a native conformational state; has an average amide protection factor that is higher than the average amide protection factor for said altered protein in a denatured conformational state; has an NMR order parameter (S^2) of greater than 0.7; or has an average B-factor value that is lower than the average B-factor value of said altered protein.

19. (Original) The method of claim 15, wherein at least 30% of the amino acid residues of said T cell epitope are selected from the group of amino acid residues consisting of isoleucine, leucine, valine, tyrosine, phenylalanine, tryptophan, threonine, and methionine.

20. - 58. (Cancelled).